

BEGINNING OF Reel

312:

Levin, V.M

(inclusive)

#

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LEVIN, V. M.

"Types of Draft Horses in the Mogilevskaya Oblast and Methods of Improving Them."
Cand Agr Sci, Moscow Order of Lenin Agricultural Academy Imeni K. A. Timirязev, Moscow,
1955. (KL, No 15, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended
at USSR Higher Educational Institutions (16).

ANDREYEVA, V.S.; GAVRILOVA, L.V.; LEVIN, V.M.; RESHETNIKOVA, Zh.V.

Acute psychotic states during antabuse treatment of chronic alcoholism.
Zhur.nev. i psikh. 59 no.6:674-678 '59. (MIRA 13:1)

1. Bol'nitsa imeni Gannushkina (glavnyy vrach V.M. Rybalka) i kafedra
psikhiatrii (zav. - prof. A.V. Snezhnevskiy) Tsentral'nogo instituta
usovershenstvovaniya vrachev, Moskva.

(DISULFIRAM, inj, eff.

psychoses (Rus))

(PSYCHOSES, etiol. & pathogne.

disulfiram (Rus))

SMULEVICH, A.B.; VIDMANOVA, L.N.; VIRKHOVSKAYA, T.V.; LEVIN, V.M.

Use of acepromazine in the treatment of mental patients. Zhur. nevrot.
i psikh. 61 no.6:890-895 '61. (MIRA 15:2)

1. Kafedra psikhiatrii (zav. - prof. A.V.Snezhnevskiy) Tsentral'nogo
instituta usovershenstvovaniya vrachev i psikhonevrologicheskaya
bol'nitsa imeni Gannushkina (glavnyy vrach V.N.Rybalka), Moskva.
(ACEPROMAZINE) (MENTAL ILLNESS)

LEVIN, V. M.

75

8/089/62/013/006/019/027
B102/B186

AUTHORS: G. T. and M. R.

TITLE: Nauchnaya konferentsiya Moskovskogo inzhenerno-fizicheskogo instituta (Scientific Conference of the Moscow Engineering Physics Institute) 1962

PERIODICAL: Atomnaya energiya, v. 13, no. 6, 1962, 603 - 606

TEXT: The annual conference took place in May 1962 with more than 400 delegates participating. A review is given of these lectures that are assumed to be of interest for the readers of Atomnaya energiya. They are following: A. I. Leypunskiy, future of fast reactors; A. A. Vasil'yev, design of accelerators for superhigh energies; I. Ya. Pomeranchuk, analyticity, unitarity, and asymptotic behavior of strong interactions at high energies; A. B. Migdal, phenomenological theory for the many-body problem; Yu. D. Fivyskiy, deceleration of medium-energy antiprotons in matter; Yu. M. Kogan, Ya. A. Iosilevskiy, theory of the Mössbauer effect; M. I. Ryazanov, theory of ionisation losses in nonhomogeneous medium; Yu. B. Ivanov, A. A. Rukhadse, h-f conductivity of subcritical plasma;

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35

Nauchnaya konferentsiya...

8/089/62/015/006/019/027
B102/B186

design of 30-Mev electron linear accelerator; Ye. G. Pyatnov, A. A. Glashov, V. G. Lopato, A. I. Finogenov, G. M. Skepskiy, V. D. Seleznev, experimental characteristics of low-energy electron linear accelerators; G. A. Zeytlenk, V. M. Levina, S. I. Piskunov, V. L. Smirnov, V. K. Khokhlov, radiocircuit parameters of Jy3(LUE)-type accelerators; G. A. Tyagunov, O. A. Val'dner, B. M. Gokhterg, S. I. Korshunov, V. I. Kotov, Ye. M. Moroz, accelerator classification and terminology; O. S. Milovanov, V. B. Varaksin, P. R. Zenkevich, theoretical analysis of magnetron operation; A. G. Tragov, P. R. Zenkevich, calculation of attenuation in a diaphragmated waveguide; Yu. P. Lazarenko, A. V. Ryabtsev, optimum attenuation length for linear accelerator; A. A. Zhigarev, R. Ye. Yeliseyev, review on trajectographs; I. G. Morosova, G. A. Tyagunov, review on more than 500 ion sources; M. A. Abroyan, V. L. Komarov, duoplasmatron-type source; V. S. Kuznetsov, A. I. Solnyashkov, calculation and production of intense ion beams; V. M. Rybin (Ye. V. Armenskiy), inductive current transmitters of high sensitivity; V. I. Korosa, G. A. Tyagunov, kinetic description of linear acceleration of relativistic electrons; A. D. Vlasov, phase oscillations in linear accelerators; E. L. Surahatyn, G. V. Voskresenskiy, beam field effects in the waveguide of an electron linear accelerator; R. S. Bobovikov,

Card ~~186~~

S/275/63/000/002/004/032
D405/D301

AUTHORS: Levin, V.M., Khokhlov, V.K., Semenov, A.R., Rumyantsev, V.V., Stepanov, S.M., Suslenko, V.K., Pomin, L.P., Shikhov, V.Ya. and Chubinskaya, I.I.

TITLE: Linear 5-35 Mev electron accelerator with X-ray head for medical purposes

PERIODICAL: Referativnyy zhurnal, Elektronika i eye primeneniye, no. 2, 1963, 46, abstract 2A269 (Elektron. uskorigeli, Tomsk, Tomskiy un-t, 1961, 10-15 (Collection))

TEXT: A pulsed accelerator is described. The frequency of the microwave field is about 2800 Mc; the electron energy can smoothly vary from 3 to 35 Mev; the mean electron current in the entire range can be brought to 18 microampere. The technical characteristics and the design of the accelerator are described. The accelerating system, the microwave supply, the vacuum system and the X-ray head device are considered in detail. All the accelerator elements were tested on laboratory stands and the working drawings

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S/275/63/000/002/004/032
D405/D301

Linear 5-35 Mev electron ...

for the entire equipment were given over to a plant for serial production.

[Abstracter's note: Complete translation]

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LEVIN, V. M.

than young men. Three fourths of students' 1
were "colds" (angina and croup), diseases of
and subcutaneous tissue, and wounds. Suggest
training in discipline and safety measures du
working hours to reduce the latter.

USSR/Medicine - Industry and Occupations
(Contd)

56/452
Proved subject students lost less time due to d
in 1947 than adult or adolescent workers, losing
45% fever days and having 78.6% fever illnesses
than adults. With exception of rheumatism and
salaries, young women students had 20% fever 11
56/4

"Q18 1 Ser" No 5

ig/Medicine - Industry and Occupations May
Medicine - Public Health
Diseases Causing Temporary Loss of Working Capa
Among Students in Trade Schools of the Metalwork
Industries of Leningrad for 1947, V. M. Levin,
Leningrad Inst of Labor Hygiene and Occupations.
Diseases, Min of Pub Health RSFSR, 62 pp

LEVIN, V. M.

Growth

Correlation of the level of arterial pressure to characteristics of physical development (such as height, weight and chest dimensions) in puberty. *Pediatrics* No. 3, 1952.

APPROVED FOR RELEASE: 07/12/2001
Monthly Bulletin of the Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

CIA-RDP86-00513R000929610001-3"

LEVIN, V.M., kandidat meditsinskikh nauk; FRIDLYAND, I.G., professor, konsul'tant;
GRIGOR'YEV, Z.E., kandidat meditsinskikh nauk, direktor; KOVNATSKIY, M.A.,
professor, zamestitel' direktora po nauchnoy chasti.

Certain clinical characteristics of peptic ulcer in adolescents. Vop.pediat.
21 no.4:40-44 J1-Ag '53. (MLRA 6:10)

1. Otdel rabocheho podrostka Leningradskogo gosudarstvennogo nauchno-issledo-
vatel'skogo instituta gigiyeny truda i profsabolevaniy (for Fridlyand).
2. Leningradskiy gosudarstvennyy nauchno-issledovatel'skiy institut gigiyeny
truda i profsabolevaniy (for Grigor'yev and Kohnatskiy). (Ulcers)

LEVIN, V.M.; FIGLIN, L.I.

Characteristics of the physical development, state of health, living conditions, and education of students at metal trade schools in Leningrad in 1954. Trudy LSOMI 31:112-128 '56. (MIRA 12:8)

1. Kafedra shkol'noy gigiyeny Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.kafedroy - prof. A.Ya. Gutkin) i Institut truda i professional'nykh zabolevaniy (dir. - kand.med.nauk Z.E.Grigor'yev).

(SCHOOL HEALTH,

phys. develop., health, living cond. & educ. in metallurgic trade schools (Rus))

IRVIN, V.M.

Cobalt chloride for studying perspiration in adolescents. Pediatrics
no.3:56-57 Mr '57. (MIRA : 10)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta gigieny
truda i profzabolevaniy O dir. - kandidat meditsinskikh nauk Z.E.
Grigor'yev), otdela rabochego-podrostka 9rukovoditel' - starshiy
nauchnyy sotrudnik V.M.Levin)
(COBALT CHLORIDE) (PERSPIRATION) (ADOLESCENTS)

LEVIN, V.M.

[Medical examination of employed adolescents] Meditsinskoe
osvidetel'stvovanie rabochikh-podrostkov. Leningrad, Medgis,
1958. 108 p. (MIRA 13:2)
(INDUSTRIAL HYGIENE) (ADOLESCENCE)

LEV IN, V.M. - kand.med.nauk

Pending problems in protecting the health of working adolescents.
Sov.zdrav. 17 no.3:37-45 Mr '58. (MIRA 11:4)

1. Iz Leningradskego nauchno-issledovatel'skogo instituta gigiyeny
truda i professional'nykh zabolevaniy (dir.-kandidat meditsinskikh
nauk Z.E.Grigor'yev)
(INDUSTRIAL HYGIENE
protection of juvenile workers, problems (Rus)

LEVIN, V.M., kand.meditsinskikh nauk

Basic problems in industrial hygiene for students during
vocational education. Gig.i san. no. 10:18-23 0 '60.

(MIRA 13:12)

(SCHOOL HYGIENE)

LEVIN, V.M., kand.med.nauk; RUTENBURG, E.S., kand.med.nauk; BARSKIY, O.B.,
mladshiy nauchnyy soizrudnik

Volume of the physician's consultative work in the school. Gig.
i san. 25 no. 12:68-71 D '60. (MIRA 14:2)

1. Iz otdela rabochey molodezhi Nauchno-issledovatel'skogo
instituta gigiyeny truda i professional'nykh zabolevaniy,
Leningrad.

(SCHOOL HYGIENE)

AGASHIN, Yu.A.; GRIGOR'YEV, Z.E.; KOVNATSKIY, M.A.; LEVIN, V.M.; OSIPOV, Yu.A.;
RAZUMOVSKIY, M.D.; RETNEV, V.M.; YURKOVICH, A.Ya.

Meeting devoted to the results of the work of the Leningrad Research
Institute on Industrial Hygiene and Occupational Diseases for 1959-
1960. Gig. i san. 26 no.8:110-114, Ag '61. (MIRA 15:4)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta gigiyony
truda i professional'nykh zabolovaniy.
(INDUSTRIAL HYGIENE)

LEVIN, V. M., kand. med. nauk

Some problems in the organization of medical care for adolescents and pupils under the new conditions. Zdrav. Ros. Feder. 6 no.5: 15-20 My '62. (MIRA 15:7)

1. Iz Leningradskogo instituta gigiyeny truda i professional'nykh zabolevaniy (dir. - prof. Z. E. Grigor'yev).

(SCHOOL HYGIENE)

LEVIN, V.M.

Medical consultation on some deviations in the internal organs
in adolescents and students. Vop.okh.mat.i det. 7 no.8:24-29
Ag '62. (MIRA 15:9)

1. Iz otdela rabochey molodezhi (rukovoditel' - kand.med.nauk
V.M.Levin) Leningradskogo instituta gigiyeny truda i profzabole-
vaniy (dir. - prof. Z.E.Grigor'yev).
(VOCATIONAL GUIDANCE--HYGIENIC ASPECTS) (CHILDREN--DISEASES)

LEVIN, V.M.

[Principles of the determination of vocational suitability of adolescents and the problems of medical vocational consultation] Printsipy opredeleniya professional'noi pri-godnosti podrostkov i zadachi vrachebnoi professional'noi konsul'tatsii. Moskva, Meditsina, 1964. 12 p.
(MIRA 18:7)

L 3773-66 ENT(e) DIAAP GS

S/0000/64/000/000/0791/0794

ACCESSION NR: AT5907950

AUTHOR: Davydov, M. S.; Dorfman, L. G.; Yekimov, V. V.; Zalmanson, V. B.; Zeytlenko, G. A.; Levin, V. M.; Malyshov, I. F.; Petelin, I. G.; Patrulin, V. I.; Popov, V. A.; Trushin, N. Kh.; Umanakiy, I. G.; Rinkel'shteyn, I. I.

TITLE: Deflecting system of 5-Gev antiproton channel

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 791-794

TOPIC TAGS: antiproton, high energy particle, particle beam, high energy accelerator

ABSTRACT: Specific requirements flowing from the applied principle of particle resolution have determined the choice of the type of deflecting system. During development of the device the requirements were also considered from the viewpoint of the high-frequency power supply system. The creation of a high-power 150-megahertz frequency generator that operates with pulses of several milliseconds duration is a technically complex task. Therefore, special attention was given during the development of the deflecting system to its economy and efficiency. Taking these considerations into account, computations were carried out of a number of

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alternate deflecting systems--in the form of a waveguide or band line operating in the energy recuperation regime, or in the form of a system of many-cavity or single-cavity volume resonators. As shown by the computations, it is most expedient to make the deflecting system in the form of a set of independently phased resonators of the quasitoroidal type, which operate in the fundamental mode of the electric oscillations, with the use of high-frequency electrical field for deflecting the particles. The report discusses the resonators employed in the deflecting system and their arrangement in the system. The chosen resonator form permits one to obtain a specific homogeneity of the deflecting field in the cross section of a beam by selection of suitable dimensions. The report discusses the characteristics of the developed system. The linear dimensions of the apertures in the resonators for channeling the beam are commensurable with the operating wavelength, which fact leads to the radiation of electromagnetic energy and the appearance of a strong bond among the resonators. In order to eliminate this phenomenon and preserve complete transparency of the channel for the beam of deflected particles among the resonators, the waveguide segments are provided with limiting wavelength much lower than the operating one, and feedback is introduced in the magnetic field. As shown by investigations, the bond among the resonators is almost completely eliminated. Considerable attention was paid to the electric transparency of the resonators.

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ACCESSION NR: AT5007950

tors. The field strength in the resonator gaps which corresponds to a given magnitude of the deflecting pulse was determined on the basis of the field pictures that were taken in an electrolytic tank. Corrections were made for the variation in the high-frequency field during the particles' flight time through a resonator and for the difference between the static and high-frequency pictures of the field in a gap. Measures were also taken to eliminate in the resonators the secondary electron resonance discharge. Orig. art. has: 2 figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury (imeni D. V. Yefremova GKAE SSSR (Scientific-Research Institute of Electrophysical Equipment, GKAE SSSR)

SUBMITTED: 26May64

NO REF SOV: 000

ENCL: 00

S UB CODE: NP

OTHER: 000

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LEVIN, V. M.

LEVIN, V.M., inzh.

Hydraulic control of relations with use of automatic corrections.
(MIRA 10:11)
Priborostroenie no.10:1-2 0 '57.
(Hydraulic engineering--Instruments) (Electronic instruments)

LEVIN, V.M.

Automatic shut-off used in pulse pipe lines. Priborostroyenie no.3:
27-28 Mr '58. (MIRA 11:4)
(Pneumatic control)

11 (4)

SOV/115-59-10-21/29

AUTHORS: Didenko, K.I., Levin, V.M.

TITLE: Measuring Small Mazout Consumptions

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 10, pp 51-53 (USSR)

ABSTRACT: With the increasing number of various furnaces in Soviet plants, the consumption of mazout will also sharply increase, especially if one bears in mind the development of Soviet industry anticipated by the Seven Year plan. The amount of liquid fuel produced from petroleum and natural gas amounted to 31% in 1958 of the whole fuel production and will reach 51% in 1965. The consumption of liquid fuel, and particularly that of mazout, must be strictly checked. The khar'kovskiy zavod (Khar'kov Plant) "KIP" constructed a series of mazout piston flowmeters for measuring the consumption of 50 - 250 lit/hour. The plant constructed a small hydromotor with sufficiently smooth motion and torque, which can use a corresponding tachometric head for summing up, teletransmission and indications of instantaneous mazout consumption. This

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SOV/115-59-10-21/29

Measuring

Small Mazout Consumptions

hydrometer, which constitutes the basic unit of the flowmeter and the tachometric head are described in detail in the article. There are 2 diagrams, 1 graph and 1 Soviet reference.

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LEVIN, V.M.

Effect of the operation of the traction network of electric railroads
on leakage currents from the rails. Sbor.nauch.rab.AKKH no. 4.
Zashch.podzem.soor.ot kor no.2:5-17 '60. (MIRA 15:7)
(Electric railroads) (Electrolytic corrosion)

LEVIN, V.M.

Two-dimensional model for studying vagrant currents. Sbor.nauch.rsb.-
AKKH no. 4. Zashch.podzem.soor.ot kor no.2:56-66 '60. (MIRA 15:7)
(Electric currents, Leakage) (Electromechanical analogies)

LEVIN, V.M., gornyy inzh.-elektromekhanik

"Full use of electric power in ore-dressing plants of the iron ore mining and ore-dressing industry" by I.S.Sverdel', E.A.Krasnianskii. Reviewed by V.M.Levin. Gor.shur. no.9:78 8 '60. (MIRA 13:9)

1. Kustanayskiy sovnarkhoz.
(Ore dressing--Equipment and supplies)
(Electric power)
(Sverdel', I.S.)
(Krasnianskii, E.A.)

LEVIN, V. M.

Cand Tech Sci - (diss) "Study of the effect of conditions of the performance of city electrified transport electric power supply on current leakage from the rails." Moscow, 1961. 16 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin Power Inst); 150 copies; price not given; (KL, 10-61 sup, 215)

LEVIN, V.M.

Using the MP fuel-oil flowmeter in measuring pulsating and abruptly
changing consumption of liquids. Priborostroenie no.1:28-30 Ja '61.
(Flowmeters)

DIDENKO, K.I.; LEVIN, V.M.; FIGOTIN, L.I.

Measuring the rate of flow of conveyed ore in pulp. Priborostroenie
no.7:3-5 J1 '61. (MIRA 14:6)

(Ore dressing) (Electric measurements)

DIDENKO, K.I.; KORSUNSKIY, L.M.; LEVIN, V.M.; LINETSKIY, I.R.

Compensatory electromagnetic flowmeter with an automatic
suppression of the quadrature interference. Priborostroenie
no.7:11-13 J1 '61. (MIRA 14:6)

(Flowmeters)

YERMILOV, V.G., dotsent; LEVIN, V.M., starshiy nauchnyy sotrudnik

Control of the operating conditions of condenser installations on
"Leninskii Komsomol" and "Sergei Botkin" -type ships. Biul.tekh.-
ekon. inform. Tekh.upr.Min.mor.flota 7 no.10:45-54 '62. (MIRA 16:9)

1. Leningradskiye vyasheye inzhenernoye morskoye uchilishche im.
admirala Makarova (for Yermilov). 2. Tsentral'nyy nauchno-issledo-
vatel'skiy institut morskogo flota (for Levin).
(Condensers (Steam)) (Steam turbines, Marine)

LEVIN, V.M.; SURIS, M.A.; TARNIZHEVSKIY, M.V.

Effective use of reinforced electric drains. Gaz.delo no.1:17-22
'64. (MIRA 17:4)

1. Akademiya kommunal'nogo khozyaystva im. K.D.Pamfilova, g. Moskva.

LEVIN, V.M.; OGANEZOVA, I.S.; TARNIZHEVSKIY, M.V.

Protecting pipelines from trolley-car track stray currents.
Zashch. trub. ot kor. no.5:38-55 '62. (MIRA 17:7)

1. Akademiya kommunal'nogo khozyaystva in. K.D. Pamfilova.

L 45256-65 EEA(w)-2/EVF(m)/EWA(m)-2 P6-7/Pat-10 IUP(c) GS
 S/0000/64/000/000/0430/0434
 ACCESSION NR: AT5007931

AUTHOR: Zeytlenok, G. A.; Lazarenko, Yu. P.; Rummyantsev, V. V.; Ryabtsov, A. V.;
 Levin, V. M.

TITLE: Selection of the optimum parameters of a linear high-energy electron ac-
 celerator

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963.
 Trudy. Moscow, Atomizdat, 1964, 430-434

TOPIC TAGS: high energy accelerator, electron beam, waveguide

ABSTRACT: Modern linear high-energy electron accelerators are complex expensive devices. The problem of lowering their cost for given characteristics of the accelerated beam is of foremost importance. In the present report, which proceeds from the condition for minimum expenditure for equipment and utilization of the accelerator, its optimum parameters are determined taking into consideration the beam capacity. It is considered here that the cost of construction and operation of the accelerator can be described by the formula

$$S = A_1 L + A_2 N \quad (A_1 = a_1 + b_1 f_p), \quad (1)$$

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L 45256-65
ACCESSION NR: AT5007031

where L is the length of accelerating system; N is the number of sections; a_i and b_i are constants found from economic analysis; t is the total time of accelerator operation (from start-up to shut-down). [G. A. Zeytlenok et al., "Atomnaya energiya," 4, No 5 (1958); *Proc. Int'l Conf. High Energy Acc.* (CERN, 1969), p. 349.] Expression (1) omits fixed expenses which do not affect the position of the minimum S and therefore can be disregarded. To formulate the basic problem, let there be given coefficients A_i , energy W , and mean current I_0 of the accelerated electron beam; as well as the characteristics of the high-frequency power supply, the supply power during pulse P , the frequency of the accelerating field ω , the duration of the pulse τ , and the pulse repetition frequency ν . It is required to determine the values of the basic parameters of the accelerator which correspond to minimum cost of the accelerator S : the accelerating field strength E_0 averaged over the length of the section, the length of one section l , the accelerator's effectiveness η , the geometrical dimensions of the sections, etc. The solution of the problem posed in the report is given for two accelerating systems: 1) system with field strength that does not vary along the length, $E = E_{av} = \text{const.}$, 2) system with a constant configuration for the wave-guide sections throughout the length. It is concluded

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ACCESSION NR: AT5007931

that the system with constant field possesses definite advantages over the system with constant geometry. Under certain conditions, however, use of the system with constant geometry may be convenient. Orig. art. has: 7 figures, 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury imeni D. V. Yefremova GKAE SSSR (Scientific Research Institute of Electrophysical Equipment GKAE SSSR)

SUBMITTED: 26May64

ENCL: 00

SUB CODE: EE, NP

NO REF SOV: 001

OTHER: 003

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LEVIN, V. M.

8c

L 46163-65 EWT(m)/EPA(w)-2/EWA(m)-2 Pt-7/Pab-10 IJP(c) OS
S/0000/64/000/000/0470/0424

ACCESSION NR: AT5007930

AUTHOR: Val'ter, A. K.; Grishayev, I. S.; Yermenko, Ye. V.; Kondratenko, V. V.;
Zeytlenok, G. A.; Kuznetsov, G. F.; Levin, V. M.; Malyshev, I. F.; Romyantsev,
V. V.; Semenov, A. N.; Turkin, F. F.; Khokhlov, V. K.

TITLE: Linear traveling-wave accelerator of electrons with output energy 2 Gev

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963.
Trudy. Moscow, Atomizdat, 1964, 420-424

TOPIC TAGS: high energy accelerator, traveling wave electron accelerator, klystron

ABSTRACT: The accelerator consists of an injector and 49 accelerating sections each 4.5 meters long. The accelerator operates with a traveling $1/2\pi$ -wave with constant phase velocity equal to the velocity of light c and group velocity equal to 0.040. The operating frequency of the accelerator is 2797 mc for a temperature of the accelerating section equal to 37°C. The energy of the accelerated electron beam is 2 Gev, the mean current is 1.2 amp for a transmission frequency of 50 times per second and duration of the high-frequency pulse of $\tau = 2$ msec. The high-frequency power supply for each section is independent of the klystron amplifier. The exci-

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tation of the klystrons is carried out from a common wave-guide line, which is supplied from a high power klystron excited by a regulated master oscillator. The group velocity of the electromagnetic wave in the excitation line is equal to about 0.805 c. The constant phase of the electromagnetic wave at klystron output is maintained by a phasing system with an accuracy of $\Delta\phi = \pm 2^\circ$. The accelerating sections are installed in a special bunker which has a concrete wall-like shield and is covered on top by sectional reinforced-concrete slabs. The output installation is shielded by a special earthen enclosure covered by reinforced-concrete slabs. Purification of the beam from harmful admixtures is carried out by means of a magnetic parallel transfer system and magnetic separators. The present report discusses the parameters of the main units, such as: the injector, the vacuum system ($2 \cdot 10^{-6}$ mm/Hg), the accelerator's high-frequency pulsed power supply, the output installation, the formation and measurement of the beam, the control of the accelerator. It is planned to store the electrons and positrons which are obtained by the present accelerator in a suitable ring, but experience must first be gained with small storage rings and colliding beams, under study at the Physico-technical Institute, Academy of Sciences, Ukrainian SSR. The present accelerator was constructed in accordance with the principle of uniform structure, but not constant field. The entire adjustment phase of the large accelerator's operation is carried

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L 46103-65

ACCESSION NR: AT5007930

out by means of one injector. "The design and parameters of the one injector was the concern of V. A. Vishnyakov and associates." Orig. art. has: 5 figures, 1 table.

ASSOCIATION: Fiziko-tehnicheskiy institut AN UkrSSR (Physico-technical Institute, AN UkrSSR); Nauchno-issledovatel'skiy institut elektro-fizicheskoy apparatury imeni D. V. Yefremova GKAE SSSR (Scientific-research Institute of Electro-Physical Equipment GKAE SSSR)

SUBMITTED: 26May64

ENCL: 00

SUB CODE: NP

NO REF SOV: 000

OTHER: 000

Cord 3/3 D.K.

BRAUDE, V.A.; DIPENKO, K.I., kand. tekhn. nauk; KORSUNSKIY, L.M.; LEVIN, V.M.

The REF electromagnetic flowmeters. Avtom. i prib. no.2:75-78 Ap-Is '65.
(MIRA 18:7,

LEVIN, V.M., kand. tekhn. nauk; LOMANOVICH, V.A., nauchnyy sotrudnik

Automatic stepped-up drainage. Vest. svyazi 25 no.6:21-23
Je '65. (MIRA 18:11)

L 46204-66 EWT(m)/ENP(j)/T IJP(c) DS/RM

ACC NR: AP6029791

SOURCE CODE: UR/0119/66/000/008/0014/0014

AUTHOR: Levin, V. M. (Candidate of technical sciences); Troyanovskiy, L. M. (Engineer)

ORG: none

TITLE: A new method for hermetic sealing of electrical conductors in a layer of teflon

SOURCE: Priborostroyeniye, no. 8, 1966, 14

TOPIC TAGS: electrode, hermetic seal, teflon, flow meter, *ELECTRODE WIRE*

ABSTRACT: A method for making hermetically-sealed electrode connections using teflon is described. The method is intended for use with such measuring devices as flowmeters. The electrode (see Fig. 1) consists of a thin wire with a diameter of 0.3—0.5 mm made of tungsten, stainless steel, titanium or tantalum soldered to a supporting steel disc. A 4 mm teflon lining is force-fitted into the flow meter tube and a small hole is drilled through the tube and part of the lining. The remaining thickness of the teflon shield is then pierced with the

Cord 1/2

UDC: 62.762

1. 10777-66

ACC NR: AP6029791

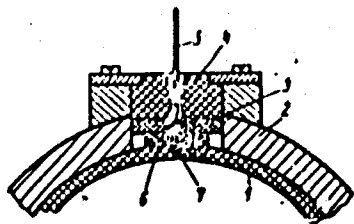


Fig. 1. Electrode diagram

- 1 - Teflon shield;
- 2 - flow meter tube;
- 3 - flexible washer;
- 4 - insulating collar;
- 5 - output lead;
- 6 - supporting disc;
- 7 - electrode.

electrode and the device is calibrated. The electrode operates at pressures up to 30 kg/cm² and has been used in several types of commercial flow meters. Orig. art. has: 1 figure. [IV]

SUB CODE: 09, 11/ SUBM DATE: none

Card 2/2 fv

L 36494-66 EWT(m)/EWP(j) RM

ACC NR: AP6027087

SOURCE CODE: UR/0079/65/035/010/1879/1879

AUTHOR: Ivin, S. Z.; Karavanov, K. V.; Lysenko, V. V.; Levin, V. M. 31
G

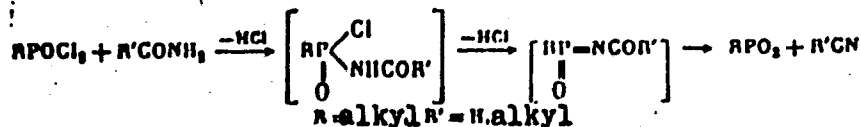
ORG: none

TITLE: Reaction of alkylidichlorophosphine oxides with carboxylic acid amides

SOURCE: Zhurnal obshchey khimii, v. 35, no. 10, 1965, 1879

TOPIC TAGS: phosphorus compound, carboxylic acid, organic amide, acetic anhydride, phosphinic acid, chemical identification, distillation

ABSTRACT: It has been established for the first time that the reaction of alkylidichlorophosphine oxides with carboxylic acid amides forms anhydrides of alkylphosphinic acids and compounds containing a cyano group. The reaction can be carried out in a solvent (boiling carbon tetrachloride) or without it at 100-130°C. In the latter case the reaction is much faster. The end products are apparently formed in three states:



Reactions of methyl- and ethyldichlorophosphine oxides with amides of formic, acetic, and trifluoroacetic acids were carried out.

Anhydrides of alkylphosphinic acids (CH_3PO_2 , $\text{C}_2\text{H}_5\text{PO}_2$) are formed

in 96% yield. They were identified by elementary analysis and by determining the acidity. Compounds containing a cyano group (HCN , CH_2CN , CF_3CN) were separated by fractional distillation and analyzed. Their content was 93-96%. [JPRS: 36,328]

SUB CODE: 07 / SUBM DATE: 30Apr65 UDC: 543.257.1+547.241+547.558.1
Card 1/1 mlp

DIDENKO, K.I., kand. tekhn. nauk; LEVIN, V.M., kand. tekhn. nauk;
UTEUSH, Z.V.

System for the automation of a material crushing process in
ball mills. Avtom. i prib. no.3:3-6 J1-S '64.

Contactless apparatus for automating the grinding operation
of ball mills. Ibid.:39-42 (MIRA 18:3)

L 00940-66 ENT(m)

ACCESSION NR: AT5015937

UR/3092/65/000/003/0051/0063

AUTHOR: Davydov, M. S.; Zeytlenok, G. A.; Levin, V. M.; Malyshev, I. F.
Petelin, I. G.; Petrunin, V. I.; Trushin, N. F.; Finkel'shteyn, I. I. ²⁶₃₄₁

TITLE: Problems of constructing the deflecting system of a 5-Gev antiproton channel 79

SOURCE: Moscow. Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury. Elektrofizicheskaya apparatura; sbornik statey, no. 3, 1965, 51-63

TOPIC TAGS: antiproton, antiproton isolation

ABSTRACT: The construction principles of an antiproton-isolating r-f deflecting system are set forth. Calculations showed that the most expedient deflecting system should comprise a set of independently-phased single-gap quasi-toroidal resonators operating at the fundamental wave mode, the deflection being accomplished by an electric r-f field. The deflection system of the OIYaI 5-Gev

Card 1/2

L 00910-66

ACCESSION NR: AT5015937

antiproton channel designed along the above lines (details given) has the following characteristics: 16 rectangular-deflecting-area resonators; resonance frequency, 150 Mc; Q-factor, 15000 or higher; shunt resistance, 0.8 Mohms; power loss in one resonator is 60 kw and in the entire deflecting system, 1 Mw at a rated electric-field strength of 31.2 kv/cm. All resonators are mounted in a 3-section 14-m long 1.5-m diameter vacuum tank. The resonators are connected to their feeders via vacuum lead-ins and two-loop matchers. A separate-excitation 1.5-Mw vhf oscillator produces 6-nsec pulses at a repetition rate of 5 p/min. Orig. art. has: 12 figures and 6 formulas.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: NP, EC

NO REF SOV: 005

OTHER: 001

Card 2/2 *AP*

STAN, J. P. KIRKLAND, R. J. LINDEN, W. V. LINDEN, W. V.

RECEIVED AT THE OFFICE OF THE DIRECTOR, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, WASHINGTON, D. C. 20546-0001, JANUARY 19, 1964.

LEVIN, V.N.

New data on the age of the Kaydan'skaya series in the Saysan-Irtysh geosynclinal zone in eastern Kazakhstan. Dokl. AN SSSR 160 no.5:1164-1165 P 165. (MIRA 18:2)

1. Submitted June 17 1964.

LEVIN, V.N. (Moskva)

Morphological changes in the pulmonary vessels in infectious-
toxic diseases in children. Vop. okh. nat. i det. 6 no.11:34-40
N '61. (HIG 14:12)
(LUNGS...BLOOD SUPPLY) (INFANTS...DISEASES)

KONONOV, V.P. (Leningrad); KUTSKO, M.Yo. (Leningrad); LEVIN, V.H.
(Leningrad); RYBAKOV, V.S. (Leningrad)

Compensation of rotor oscillations of a synchronous motor fed
from a rectifier converter. Izv. AN SSSR. Energ. i transp. no.2:
123-128 Mr-Apr '65. (MIRA 18:6)

OLKBOV, Igor' Alekseyevich; LEVIN, V.N., otv.red.; DOLMATOV, P.S.,
red.izd-va; SMIRNOVA, A.V., tekhn.red.

[Synchronous generator excitation systems with controlling
converters] Sistemy vzbuzhdeniya sinkhronnykh generatorov
s upravlyаемymi preobrazovateliami. Moskva, Izd-vo Akad.nauk
SSSR, 1960. 335 p. (MIRA 14:1)
(Electric generators)

LEVIN, V.N.; RABKIN, R.L.; SMOLIN, M.A.

Use of frequency converters in the electric drive system of
synthetic fiber molding machines. Khim. volok. no.3:30-32 '64.
(MIRA 17:8)

1. Leningradskiy institut aviatsionnogo priborostroyeniya
(for Levin). 2. Spetsial'noye konstruktorsko-tekhnologicheskoye
byuro mashin khimicheskikh volokon, g. Leningrad (for Rabkin,
Smolin).

BARDARCHUK, V.I.; LEVICH, V.M.

The HP-113 vertical press-fitting and broaching machine.
Biol. techn.-akon. inform. Gos. nauch.-issl. inst. nauch.
i tekhn. inform. 18 no.10:27-28 0 '65. (HEA 18:12)

ACC NR:

AR7000955

SOURCE CODE: UR/0275/66/000/011/V021/V021

AUTHOR: Kononov, V. P.; Levin, V. N.; Rybakov, V. S.

TITLE: Increased reliability of performance of a controlled transistorized rectifier

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 11V135

REF SOURCE: Tr. Leningr. in-t aviats. priborostr., vyp. 47, 1966, 82-85

TOPIC TAGS: electronic rectifier, transistor, *RELIABILITY ENGINEERING*

ABSTRACT: Controlled transistorized rectifiers are used for regulated d-c loads with a capacity of up to several hundred volts. The transistors are actuated by a broad pulse lasting $2\pi/m$, where m is the number of phases of the feed voltage. Because of the network's inductance, the transistor's performance time exceeds this value by the time necessary for switching. If the control pulse ends before the switching passes, the transistor will be prematurely closed. This will lead to increased losses in the collector, heating of the transistor, and lowering of the rectifier's efficiency. To widen the control pulse, it is proposed that a magnetiza-

Card 1/2

UDC: 621.314.61

ACC NR: AR7000955

tion choke be connected into the chain of the transistor base to shunt the transistor. To achieve better deactivation of the transistor during the negative half-period, it is proposed that a resistor be included at the general point of the emitters. A basic diagram of a full wave rectifier together with the above indicated additional elements is presented in the article. [Translation of abstract] [GC]

SUB CODE: 09/

Card 2/2

LEVIN, V. P.

Levin, V. P. -- "Method of Rectangular Projection in Two Planes not Intersecting at a Right Angle as the Basis for a New Method of Transformation of Projections." Min Higher Education USSR, Leningrad Order of Labor Red Banner Technological Institute Leningrad Soviet, Leningrad, 1955 (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Knizhnaya Letopis', No. 23, Moscow, Jun 55, pp 87-104

KARASEV, M.A.; LEVIN, V.P.; MITROFANOV, G.I.; TIMOFEYEV, I.V.;
SHAROBOYKO, T.N., red.

[Descriptive geometry; a textbook] Nachertatel'naia
geometriia; uchebnoe posobie. Leningrad, In-t inzhenerov
zhel-dor. transp. Pt.1, no.2. 1964. 75 p.

(MIRA 17:12)

1. Leningrad. Institut inzhenerov zheleznodorozhnogo
transporta. Kafedra "Nachertatel'naya geometriya i grafika.

LEVIN, V. R.

Vliianie viazkosti masel na rabotu maslianoi sistemy aviamotora.
(Tekhnika vozdushnogo flota, 1945, no.7/8, p.15-21, diagrs.)

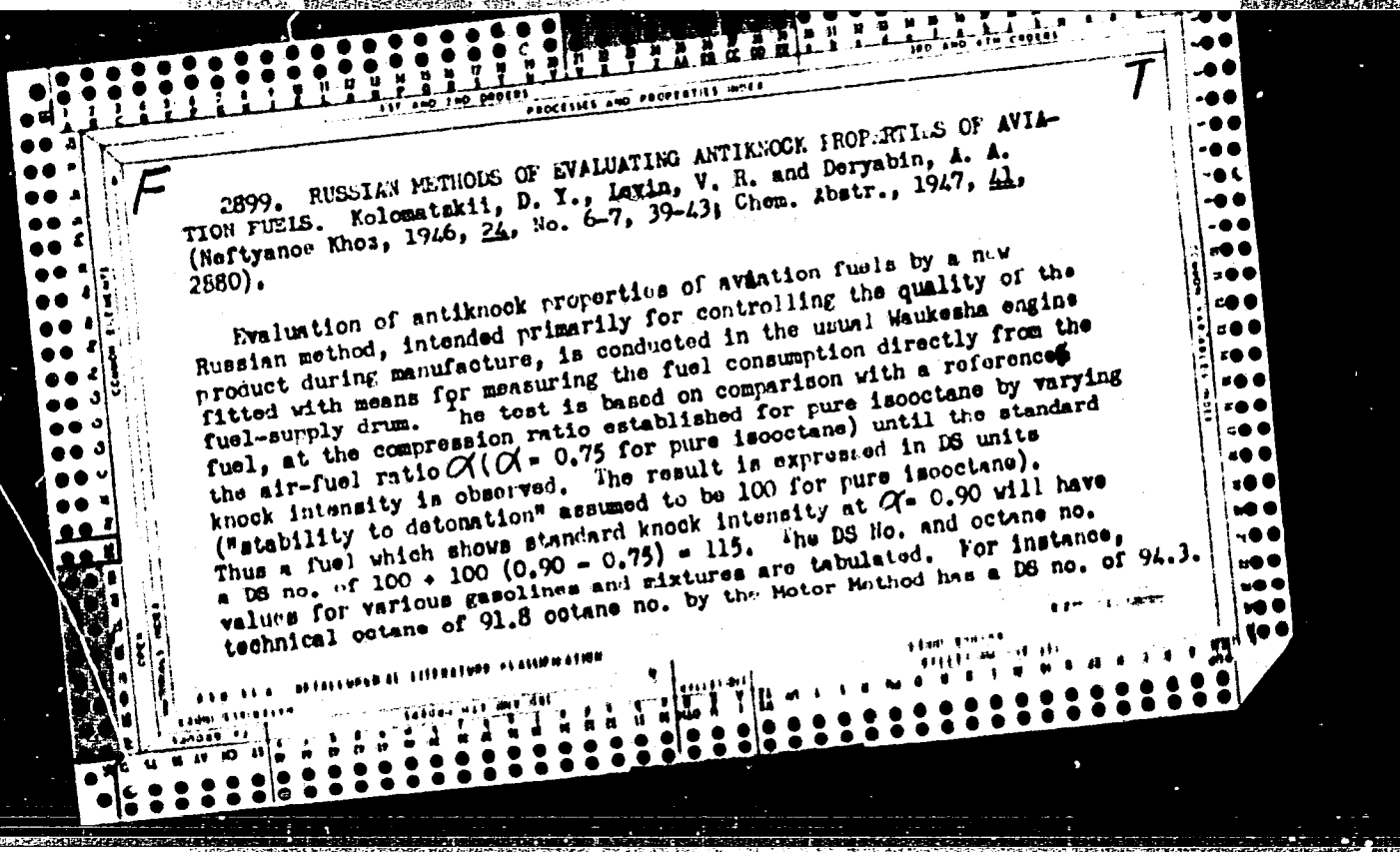
Title tr.: Effect of viscosity of oil on the performance of the
lubricating system of an aircraft engine.

TL504.Th 1945

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955.

LEVIN, V. R., and POLIKOVSKIY, V. I.

The problem of Balancing the Output of Scavenging and Pressure Oil Pumps
of Aviation Engines. 1946.



1st and 2nd copies		PROCESSING AND PROPERTY INDEX		100 AND 100 COPIES	
F		2633. OCTANE NUMBER AS A MEANS OF EVALUATING ANTIKNOCK PROPERTIES OF AVIATION FUELS. Kolomatskii, D. Ya., Levin, V. R. and Deryabin, A. A. (Neftyanoe Khoz., 1946, 24, No. 8, 52-9; Chem. Abstr. 1947, 41, 3947).		N	
The determination of octane number for lean mixtures alone is entirely insufficient for evaluating the antiknock properties of an aviation fuel. In any case, the aviation engine in practice seldom operates under maximum fuel economy. Furthermore, with increase in the richness of the mixture, aromatic fuels have substantially better antiknock properties than paraffin-naphthene base fuels of equal octane no. This is confirmed by experiments. It is also shown that, in contrast to prevailing opinion, the aromatic fuels (e.g., a pyrolysis benzene plus 4 ml. of ethyl fluid) possess a high lead susceptibility and are capable of improving the antiknock properties of paraffinic fuels, both for the rich and lean mixtures.					
FIG. 51.4 METALLURGICAL LITERATURE CLASSIFICATION					

F 5351. METHODS OF RATING ANTIDETONATION QUALITIES OF AVIATION FUELS
 Kolomatskii, D. Ya. and Levin, V. R. (Tekh. Vozdushnogo Flota, 1947, vol. 21, (3), 19-24; abstr. in Chem. Abstr., 1950, vol. 44, 312).
 Methods for determining antiknock ratings are reviewed. The C. F. R. motor method for fuels below 100 octane number, C. F. R. motor method 1 C and the corresponding English method, and C. F. R. motor method 3 C (now called F 4) with supercharging are described and discussed. The Russian Ts. I.A.M. motor method for aviation fuels is designed to give better agreement with actual operating performance in aviation engines. The test is run in a Waukesha type engine equipped to measure fuel consumption. Isooctane is used to standardize a commonly used aviation gasoline, which is then used as the standard fuel. The compression ratio at which standard knock intensity is obtained for the standard fuel with fuel-air ratio (α) = 0.8 is found. Then the experimental fuel is tested at the same compression ratio and its α found for standard knock intensity. The antiknock rating or detonation stability (DS) is calculated from the formula $DS = A \pm 100 \Delta \alpha$, where A is the DS of pure isooctane (100) and $\Delta \alpha$ is the difference in fuel-air ratio between the experimental and

the standard fuel. Results obtained by the different methods are compared.

C.A.

POLIKOVSKII, V. I. and V. R. LEVIN.

K voprosu o balance proizvoditel'nosti otkachivaiushchei i nagnetaiushchei
maslianykh pomp aviatsionnykh motorov. Moskva, Oborongiz, 1947.

Title tr.: Efficiency balance of exhaust and pressure pumps of aircraft
engines.

NCF

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library
of Congress, 1955

LEVIN, V.R.

Work of the Ust'-Aldanskiy District Antituberculosis Dispensary.
Vop. epid. i klin. tub. 5:50-56 '58. (MIRA 14:12)
(UST'-ALDAN DISTRICT--TUBERCULOSIS--PREVENTION)

LEVIN, V.R.

Recurrence of pulmonary tuberculosis in adults according to
dispensary data. Probl. tub. 41 no.5:53-58 '63.

(MIRA 17:1)

1. Iz dispansernogo sektora (zav. - prof. M.I. Oyfobakh)
TSentral'nogo instituta tuberkuleza (dir. - deystvitel'nyy
chlen AMN SSSR prof. N.A. Shmelev) Ministerstva zdраве-
okhraneniya SSSR, Moskva.

BLAGODARNYY, Ya.A., kand.med.nauk; LEVIN, V.R.; AMAN'HOLOV, S.A., kand. vet. nauk; KERIMBEKOV, B.K.; KOROTEYEVA, L.V.; LISIKHIN, I.A.; MODELEVSKIY, B.Sh.; MUNAYTBASOVA, G.A.; SHAPIRO, D.M., kand.med.nauk; CHUMINA, L.N.

Materials of the expedition for the study of tuberculosis in Kzyl-Orda Province of the Kazakhs S.S.R. Probl. tub. 42 no.8:9-15 '64. (MIRA 18:12)

1. Otdel epidemiologii tuberkuleza (zav. - kand.med.nauk Ye.A. Blagodarnyy) Kazakhskogo instituta krayevoy patologii (direktor - kand.med.nauk B.A.Atchabarov) AMN SSSR, Alma-Ata; i otdel epidemiologii i organizatsii bor'by s tuberkulezom (zav. - prof. S.V.Massino) Tsentral'noy instituta tuberkuleza (direktor - deystvitel'nyy chlen AMN SSSR prof. N.A.Shmelev) Ministerstva zdravookhraneniya SSSR, Moskva.

L 6331-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/GG
 ACCESSION NR: AP5019873
 AUTHOR: ^{44, 55} Druzhinin, V. V.; ^{44, 55} Cherepanov, V. I.; ^{44, 55} Levin, V. S.
 TITLE: On the calculation of the energy spectrum of ions with configuration $3d^N$
 in a classical field of cubic symmetry
 SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2513-2518
 TOPIC TAGS: ^{21, 44, 55} cubic crystal, crystal symmetry, spectral energy distribution, group
 theory, spin orbit interaction, matrix function, perturbation method, tensor

ABSTRACT: To calculate the energy spectrum, the authors select the wave functions of the zero-order approximation of the problem as the functions that diagonalize part of the perturbation operator for the medium crystalline field, which scheme is known to be equivalent to the scheme of the strong crystalline field. It is more convenient, however, to calculate the medium-field scheme because no Clebsch-Gordan coefficients are necessary for fractional parentage coefficients for the groups of point symmetry. The spin-orbit interaction energy is neglected. The interaction of the terms is taken into account. The matrix elements are calculated with the aid of formulas derived by means of the method of irreducible tensor operators. Orig. art. has; 13 formulas.

Card 1/2

0902 0026

L 6331-66

ACCESSION NR: AP5019873

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A. M. Gor'kogo, Sverdlovsk
(Ural State University) 44.55

SUBMITTED: 28Dec64

ENCL: 03

SUB CODE: 88, NP

NR REF SOV: 003

OTHR: 007

nw

Card 2/2

21(4)

PHASE I REACTOR EXPLOITATION 304/2583
International Conference on the Peaceful Uses of Atomic Energy.
2nd, Geneva, 1958.

Bolskoye soveshcheniye uchenykh; yadernyye reaktory i yadernyye energiya. (Reports of Soviet Scientists; Nuclear Reactors and Nuclear Power.) Moscow, Atomizdat, 1958. 707 p. (Series: Itogi Nauki i Tekhn., vol. 2) Russian slip inserted. 6,000 copies printed. General Eds.: M.A. Dolzhenko, Corresponding Member, USSR Academy of Sciences; A.L. Kravtsov, Doctor of Physical and Mathematical Sciences; A.I. Lysenko, Member, Ukrainian SSR Academy of Sciences; I.I. Pavlov, Corresponding Member, USSR Academy of Sciences; I.I. Alyab'yev, Tech. Ed.: Ye. L. Masl'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

CONTENTS: This is the second volume of a six-volume collection on the peaceful use of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Geneva. Volume 2 consists of three parts: 1 to 13, devoted to atomic power plants under construction in the Soviet Union; the second lower plants under construction in the Soviet Union; the third, which is predominantly theoretical, to problems of nuclear reactor physics and the work to improve them; and the fourth, to problems of reactor construction engineering. The first part of this volume contains the reports of all volumes of the set. References appear at the end of the articles.

Moscow, V.I. V.S. Dikarev, M.B. Yegorov, and Yu. S. Saltzman. Measuring Neutron Spectra in Uranium Water Lattices (Report No. 2152) 546

Krasin, A.K., B.G. Dubovskiy, M.N. Lutskev, Yu.Yu. Gladkov, M.K. Gocharov, A.V. Krasov, L.A. Gerasimov, V.Y. Yastov, Ye.I. Shcheglov, and A.P. Semchenkov. Studying the Physical Characteristics of a Beryllium-moderator Reactor (Report No. 2146) 555

Galkin, A.G., S.A. Neulovskaya, A.P. Budik, Yu. G. Abor, V.P. Melnik, and P.A. Kruchitskiy. Critical Experiment on an Experimental Heavy-Water Reactor (Report No. 2036) 570

Kurbank, G.I., V. Ye. Pukhn, Ye. I. Pogodalina, V.Y. Sholov, I.P. Tyuterev, S.T. Platonova, and G.I. Bruchinina. Certain Problems in Nuclear Reactor Physics and Methods of Calculating Them (Report No. 2151) 588

Shchutkin, G.V. and V.M. Semenov. Determination of Control Rod Effectiveness in a Cylindrical Reactor (Report No. 2469) 613

Alifand, I.M., S.M. Feynberg, A.S. Prolov, and M.M. Chentsov. Solving the Monte Carlo Method of Random Sampling for Solving the Elastic Equation (Report No. 2161) 628

Leletkin, M.I. Neutron Distribution in a Heterogeneous Medium (Report No. 2189) 634

Kasarnovskiy, K.V., A.V. Stepanov, and P.L. Shapiro. Neutron Thermalization and Diffusion in Heavy Media (Report No. 2163) 651

Vernik, A.I., V.S. Yermakov, and A.V. Lykov. Using the One-Group Theory for Studying Neutron Distribution in the Absorbing Media of Nuclear Reactors (Report No. 2224) 668

Bedar, D.L., S.A. Burdin, A.A. Butusov, V.I. Karlin, and V.Y. Orlov. Studying the Spatial and Energy Distribution of Neutrons in Different Media (Report No. 2177) 674

Smirnov, A.B. Boron Ionization Chambers for Work in Nuclear Reactors (Report No. 2084) 690

Kirillin, V.G., and S.A. Kirpin. Experimental Determination of Specific Volumes of Heavy Water in a Wide Temperature and Pressure Range (Report No. 2471) 696

21 (8)

AUTHORS:

Broder, D. L., Kutuzov, A. A., Levin, V. V., Orlov, V. V. Turusova, A. V. SOV/89-7-4-1/28

TITLE:

The Passage of Fast Neutrons Through Lead and Iron

PERIODICAL:

Atomnaya energiya, 1959, Vol 7, Nr 4, pp 313-320 (USSR)

ABSTRACT:

The present paper gives the results obtained by measuring the spatial distribution of fast neutrons (originating from monoenergetic neutrons of the energy $E_0 = 4 \text{ Mev}$ and $E_0 = 14.9 \text{ Mev}$) and of neutrons of atomic reactors in iron and lead. First, the experimental arrangements are discussed. The reactor of the Pervaya atomnaya elektrostantsiya (First Atomic Power Plant), an experimental nuclear reactor of the VVR type with ordinary water and enriched uranium, and a neutron generator were used as neutron sources. The spatial distribution of neutrons in iron and lead was measured by means of a neutron generator, a neutron detector, and D- and T-targets. A Th^{232} -fission chamber and threshold indicators ($\text{Al}^{27}(\text{n,p})\text{Mg}^{27}$, $\text{P}^{31}(\text{n,p})\text{Si}^{31}$, and $\text{S}^{32}(\text{n,p})\text{P}^{32}$) were used as detectors. The distribution of thermal and epithermal neutrons was measured

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The Passage of Fast Neutrons Through Lead and Iron

SOV/89-7-4-1/28

by means of a U^{235} -fission chamber. The results of these measurements in iron and lead are shown by 4 diagrams. The authors then theoretically investigate an infinite homogeneous medium in which an unbounded, plane isotropic source of mono-energetic neutrons with the energy E_0 is located. Neglecting the moderation of neutrons in elastic scattering, the kinetic equation for the neutron collision density $\psi(r, E)$ is written down. The inelastic scattering is here assumed to be isotropic. The aforementioned equation is then transformed by means of a Fourier transformation, and is solved by employing the method of spherical harmonics. The calculation is then followed step by step, and the asymptotic solution is explicitly written down. A formula is written down for the neutron flux with the energy E in a medium with point source. The results shown by some diagrams for iron agree well with the experiment. The same also applies to the results for lead. The computation method suggested makes it possible, if the differential cross sections of elastic and inelastic scattering of neutrons are sufficiently well known, to determine the spatial- and energy distribution of neutrons in thick layers of matter having comparatively high nuclear charge numbers (e.g. greater than 56)

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The Passage of Fast Neutrons Through Lead and Iron

SOV/89-7-4-1/28

with sufficient accuracy. At large distances from the source, the neutron spectrum is enriched with considerably slowed-down neutrons. If the energy distribution is known, the shield may be calculated according to the multigroup theory. The authors thank Professor A. K. Krasin, Candidate of Technical Sciences A. N. Serbinov, and the scientific co-worker V. A. Romanov for their constant interest in the present paper and for their collaboration in the experiment. Besides, the authors thank V. G. Liferov, Z. S. Blistanov, and V. S. Tarasenko for their assistance in the experiments. S. A. Kurkin assisted in working out the calculation method, and M. B. Yegiazarov, V. S. Dikarev, V. G. Madeyev, Ye. N. Korolev, and N. S. Il'inskiy further took part in the experiments. There are 9 figures and 14 references, 4 of which are Soviet.

SUBMITTED: January 21, 1959

Card 3/3

33472

S/170/62/005/002/004/009
B104/B138

17.1400

21.2400

26.2224

AUTHORS: Broder, D. L., Kutuzov, A. A., Levin, V. V.

TITLE: Shielding properties of water, polyethylene, and Plexiglas

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 2, 1962, 47 - 51

TEXT: In an effort to estimate the shielding action of hydrogenous mixtures against fast neutrons, the authors calculated the distribution of fast neutrons in hydrogen and water. The attenuation of a stream of fast neutrons in a hydrogenous mixture with the initial energy E_0 can be calculated from

$$\Phi(r, E_0, E_{rp}) = \frac{Q(E_0)}{4\pi r^2} e^{-\sum_i \rho_i \sigma_{rem}^i(E_0)(1-\epsilon)r} \int_{E_{rp}}^{E_0} \varphi(E, E_0, \theta r) dE, \quad (1),$$

where $Q(E_0)$ is the power of a point source of neutrons, V is the volume part of hydrogen nuclei in the shield, and $\varphi(E, E_0, \theta r)$ is the spectrum of moderated neutrons. The results are consistent with H. Goldstein's (Fundamental Aspects of Reactor Shielding. Pergamon Press, London-Paris, 1959).
Card 1/2

43352
S/170/62/005/012/005/008
B104/B186

21.8400

AUTHORS: Broder, D. L., Kumuzov, A. A., Levin, V. V., Frolov, V. V.

TITLE: Using the method of removal cross sections for calculating
a shield that contains no hydrogen

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 12, 1962, 65 - 70

TEXT: Attenuation of a monoenergetic neutron flux in Al and in mixtures of Al containing equal portions of Pb and Fe was measured; also attenuation in an assembly of Al plates with Fe, Pb, plexiglass or polyethylene blocks placed between source and detector. The neutron sources used were the reactions $D^2(D,n)He$ ($E_0 = 4$ Mev), $T^3(D,n)He^4$ ($E_0 = 14.91$ Mev) and a U^{235} disk exposed to a thermal neutron flux extracted from the reactor of the first atomic power plant in the world. A fission chamber with Th^{232} was used as detector. Results: (1) the removal cross section method can be used to calculate a shield in which light substances are used instead of water; (2) in most cases the removal cross section depends on the moderator only slightly; (3) the removal cross section

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ACCESSION NR: AT4019031

S/0000/63/000/000/0052/0060

AUTHOR: Broder, D. L.; Kutuzov, A. A.; Levin, V. V.; Frolov, V. V.

TITLE: Application of the "removal cross section" method to the computation of non-hydrogen-containing shielding

SOURCE: Voprosy* fiziki zashchity* reaktorov; sbornik statey (Problems in physics of reactor shielding; collection of articles). Moscow, Gosatomizdat, 1963, 52-60

TOPIC TAGS: nuclear reactor, reactor shielding, iron shielding, lead shielding, non-hydrogenous shielding, removal cross section, neutron, neutron spatial distribution, neutron decelerator, aluminum shielding, boron carbide

ABSTRACT: The author; first briefly describe the removal cross section method for the computation of the spatial distribution of neutron streams in hydrogen-containing shielding. Some of the limitations of the method are discussed along with an analysis of the difficulties often encountered in its application (for example, in homogeneous mixtures). The hypothesis has previously been advanced that, by prescindng from the question of the accumulation of low-energy neutrons, the removal cross section technique might be applied to media

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ACCESSION NR: AT4019031

containing other light decelerators in place of hydrogen. In these previous investigations, boron carbide in a mixture with iron and lead was studied as the decelerator. Some of the findings of this research are discussed in the present article, which also gives additional experimental data which prove the feasibility of extending and generalizing the removal cross section method to heavier slowing media. Aluminum was employed as the decelerating medium in the tests reported on in this paper. Neutron sources with $E = 4$ Mev and 14.9 Mev were used. In addition, measurements were made of the removal cross sections of iron and lead in boron carbide in the fission neutron spectrum and the removal cross section of iron in the spectrum of the VVR reactor. As neutron sources the authors used the reactions $D(d, n) He^3$ with an initial neutron energy of $E = 4$ Mev, and $T(d, n) He^4$ ($E = 14.9$ Mev), and also a disk of U^{235} removed from the reactor of the Pervoy v mire atomnoy elektrostantsi (World's First Atomic Power Station) and placed in a stream of thermal neutrons. The sources were in the form of disks with a diameter of 10 cm for the mono-energetic neutron sources, and 46 mm for the fission spectrum source. Fast neutrons were detected by means of a fission chamber with Th^{232} . Further details on the experimental apparatus are given in the article. Graphs are presented showing the spatial distribution of the fast

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neutrons in different substances and mixtures, as well as the dependence of the removal cross sections of iron and lead in aluminum (and of polyethylene and plexiglass in aluminum) for neutrons with $E = 4$ Mev and 14.9 Mev on various controlled experimental factors (distance between source and detector, distance between block of removed material and detector, etc). A table is given showing removal cross sections measured in water, boron carbide and aluminum. It is shown that the removal cross section method is applicable to the computation of shielding in which other light media are employed as decelerators in place of water: for example, boron carbide or aluminum. The magnitude of the removal sections for the majority of the substances tested depend only slightly on the choice of the decelerating medium. If a light component is lacking in the shielding, the authors found that the use of the removal cross section method is possible provided the removal cross section of the material in the given medium is known or if the lower boundary of the energy group is substantially raised. Several other significant conclusions are discussed in the article. "The authors thank V. P. Bogdanov, S. G. Osipov, G. V. Rykov, V. S. Tarasenko and A. I. Chusov for taking part in the measurements."

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Card → 4/4

SHTEYNBERG, D.S., otv. red.; IGUMNOV, A.N., red.; LUKS, A.A., red.; ROMEN-
SON, B.M., red.; LEVIN, V.Ya., red.; ARDASENOVA, L.P., red. izd-
va; SEREDKINA, N.F., tekhn. red.

[Guidebook for the field trip to the Vishnevyye Mountains, Karabash,
and the Il'men Mountains] Putevoditel' ekskursii Vishnevyye gory -
Karabash - Il'menskie gory. Sverdlovsk, 1961. 62 p. (MIRA 14:8)

1. Ural'skoye petrograficheskoye soveshchaniye, 1st.
(Ural Mountains—Geology—Field work)

LEVIN, V. Ya

Levin, V. Ya. -- "Investigation of a Nozzle and a Chamber in Connection with the Problem of a Pulsating Turbine." Min Higher Education USSR. Belorussian Polytechnic Institute N. V. Stalin. Chair of "Heat Supplies and Ventilation." Minsk, 1956. (Dissertation for the Degree of Candidate in Technical Science)

SO: Knizhnaya Letopis', No 12, 1956

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10.2000

SOV/123-59-24-104006

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 24, p 417 (USSR)

AUTHOR: Levin, V.Ya.

TITLE: Losses in the Nozzle During the Outflow of Pulsating Streams

PERIODICAL: Tr. Kuybyshevsk. aviats. in-t, 1958, Nr 6, pp 19 - 26

ABSTRACT: The author describes an experimental investigation of losses in subsonic nozzles during the outflow of adiabatic pulsating streams. The pulsation of the stream was generated with the aid of a valve which was opened and closed by the engine according to the flow of the stream. In the analysis, the average speed ratio of the nozzle was determined as $\varphi_c = W_{g\text{ av.}} / W_{t\text{ av.}}$ where $W_{g\text{ av.}}$ and $W_{t\text{ av.}}$ are the average actual and theoretical speed of outflow. The coefficient φ_c was rated according to the averaged, over time, friction pressure values which were measured during the test before the nozzle and behind it. The friction pressure behind the nozzle was measured by a pick-up which was mounted into the plate-trap placed at some distance from the nozzle perpendicular to the jet. The tests were carried out with three nozzles of different configuration. The M-number at the

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Losses in the Nozzle During the Outflow of Pulsating Streams SOV/123-59-24-104006

nozzle outlet was varied from 0.8 to 1, the pulsating frequency from 500 - 1,000 cycles per second. Based on the tests carried out, it was found that for the outflow of a pulsating stream from a nozzle, the loss factor can be taken as practically equal to the loss factor for an outflow of a steady stream from the same nozzle.

K.V.V.

4

Card 2/2

69345
SOV/123-59-20-85456

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 20, p 392 (USSR)

10.6000 26.1000
AUTHORS: Dorofeyev, V.M., Levin, V.Ya.

TITLE: Device for the Impulse Recording of Pulsating Jets (Impulse Gage)

PERIODICAL: Tr. Kuybyshevsk. aviats. in-ta, 1958, Nr 6, pp 49 - 55

ABSTRACT: The authors investigate the circuit and give a description of the design of the device (D) - an impulse gage³ for the recording of the instantaneous value of jet thrust³. The operation principle of the D consists in the active method of measuring the jet thrust. A trap (plate), cantilever-suspended on the shaft, and rigidly fastened in a stationary bushing, oscillates under the effect of pressure from a moving stream which hits the trap from the nozzle. The shaft on which the trap is suspended, undergoes a bending deformation. On the shaft (in parallel planes), at an equal distance from the trap axle, two identical wire-type resistance pick-ups (tensometers) are glued, which represent the two arms of a Wheatstone bridge. The presence of two pick-ups, placed under identical conditions, but being submitted to different deformations (tension and compression), ensures the thermal compensation, i.e. eliminates the

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Device for the Impulse Recording of Pulsating Jets (Impulse Gage)

temperature effects of the surrounding medium and shaft on the recording of D. The bridge is supplied with current of 4,000 cycles from a sound generator. The variations of current with time obtained from the bridge, are transmitted through a special amplifier to the oscillograph loop and are fixed there. The D makes it possible to measure the impulse of a moving gas jet, to record the thrust at a given time, and to investigate the pulsating stream, taking into account the unsteadiness. It makes it possible to determine impulse losses of the pulsating jet when the latter is flowing from the nozzle. If, with the aid of D, the operating pulsating chamber is investigated, it is possible to obtain additional functions which facilitate the investigation of the operation process of the chamber. The principal circuits of the D are given, as well as an exemplary oscillogram of the trap fluctuations.

L.I.A.

X

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LEVIN, V. Ya (Cand. Tech. Sc.)

"Measuring Reactive Traction (Thrust) by the Gas Dynamic Method."

report presented at the 13th Scientific Technical Conference of the Kuybyshev Aviation Institute, March 1959.

28312

S/081/61/000/016/019/040
B143/B101

26.7195

AUTHORS: Otorodnikov, N. N., Levin, V. Ya.

TITLE: Measurement accuracy of rapidly changing temperatures in gases by instruments with thermal inertia compensation

PERIODICAL: Reperativnyy zhurnal. Khimiya, no. 16, 1961, 141, abstract 16-5 (Tr. Kuybyshevsk. aviats. in-t, no. 8, 1959, 65 - 78)

TEXT: The authors mathematically analyzed the measurement conditions of non-stationary temperatures in gaseous media and the error occurring in temperature measurements with the aid of instruments with thermal inertia compensation. Different variants of the design of thermocouples that are used for measuring non-stationary temperatures were studied. Recommendations were made for the relatively best methods of producing and using thermocouples: volume heat capacity of the thermoelectrodes and their diameters must be equal, the thermoelectrodes must be butt welded without metallic regulus, the temperature influence of the ceramic on the hot joints and the transverse airflow at the ends of the thermoreceiver projecting from the ceramic must be eliminated. It was concluded from the

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Measurement accuracy of...

analysis results that the minimum error in non-stationary temperature measurements in gases may attain 10 - 15%. This is in contrast to the opinions of designers of instruments with thermal inertia compensation on the temperature measurement error of Δt_2 with these apparatus.
[Abstracter's note: Complete translation.]

✓

Card 2/2

LEVIN, V.Ya., otv. red.; STAROBINSKIY, H.M., otv. red.; KULIAOV,
P.S., red.

[Industrial applications of ultrasonic waves; transac-
tions] Promyshlennoe primeneniye ul'trazvuka; trudy. Kuy-
byshev, 1961. 238 p. (MIRA 17:9)

1. Vsesoyuznaya mezhvuzovskaya konferentsiya po promyshlen-
nomu primeneniyu ul'trazvuka, Kuibyshev, 1960.

LEVIN, V. YA

PHASE I BOOK EXPLOITATION

SOV/5971

Dorofeyev, Vitaliy Mitrofanovich, and Veniamin Yakovlevich Levin

Ispytaniya vozdukhno-reaktivnykh dvigateley (The Testing of Air-Breathing Jet Engines) Moscow, Oborongiz, 1961, 220 p. Errata slip inserted 10,000 copies printed.

Reviewer: A. A. Lakshtovskiy, Candidate of Technical Sciences; Ed.: L. S. Skubachevskiy, Engineer; Ed.: L. I. Sheynfayn; Tech. Ed.: L. A. Garnukhina; Managing Ed.: S. D. Krasil'nikov, Engineer.

PURPOSE: This book is intended for use as a textbook at schools of higher technical education. It may also be useful to industrial engineers.

COVERAGE: The book deals with various types of tests for air-breathing jet engines. Described are techniques and methods for the processing of measurement data, measuring instruments and devices, and laboratory and test-stand equipment. Ch. VI was written by S. N. Yeremin, Engineer. V. S. Kondrusev, Engineer, wrote Ch. VII. The authors thank G. M. Gorbunov, L. B. Yevangulov, and Yu. K. Zastel, Docents; A. A. Lakshtovskiy, Candidate of Technical Sciences; Z. L. Kropp, Engineer; V. N. Pikul,

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The Testing of Air-Breathing(Cont.)

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Engineer; and members of the faculty of the Kuybyshevskiy aviatsionnyy institut (Kuybyshev Aviation Institute) and L. S. Skubachevskiy, for their advice and assistance with the manuscript. There 38 references: 32 Soviet and 6 English.

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3. Methods for the flight testing of turbojet engines

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SUBJECT: Aerospace

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